

REMARKS

Claims 1-20 are pending. Claims 1-20 stand rejected. Claim 1 has been amended.

Reply to the Rejection of Claims 1-5 under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 1-5 as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Specifically, the Examiner states that it “is unclear what is meant by ‘substantially no stabilizing surfactants’, because these additives are generally used in very small amounts”, and that it is not clear how much of the additives may be present.

Page 8, lines 19-21 of the present specification states that the aqueous polymer composition of the present application contains “essentially no stabilizing surfactants, *as opposed to a latex or emulsion polymer composition*” (emphasis added). U.S. Patent No. 6,337,359 to Diehl *et al.* (“Diehl”), cited by the Examiner in the 102(b) rejection discussed below, teaches a latex polymer composition. The latex composition of Diehl requires a surfactant in the amount of about 0.05 to 2.0 wt % (col. 3, lines 42-58; claim 1 of Diehl). Accordingly, one skilled in the art would recognize that the claimed aqueous polymer composition of the present invention, if it contained any stabilizing surfactant, would be in an amount less than, *e.g.*, about 0.05 to 2.0 wt % and most likely would contain no stabilizing surfactant (*see, e.g., Morton Int'l Inc. v. Cardinal Chemical Co.*, 5 F.2d 1464, 1470, 28 U.S.P.Q.2d 1190, 1194 (Fed. Cir. 1993) (“Whether a claim is invalid for indefiniteness requires a determination whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.”); *Miles Laboratories, Inc. v. Shandon Inc.*, 997 F.2d 870, 874-75, 27 U.S.P.Q.2d 1123, 1126 (Fed. Cir. 1993) (“If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more.”)). For at least these reasons, the phrase ‘substantially no stabilizing surfactants’ is not indefinite.

It is believed that these remarks overcome the Examiner’s rejection of claims 1-5 as being indefinite added. Withdrawal of the 35 U.S.C. § 112, second paragraph rejection is respectfully requested.

Reply to the Rejection of the Claims under the Double Patenting Doctrine

The Examiner has provisionally rejected claims 1-10 and 12-18 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of co-pending U.S. Application No. 09/690 387.

Submitted herewith is a terminal disclaimer disclaiming that portion of any patent granted that would extend beyond the term of any patent that may issue from U.S. Application No. 09/690 387. It is believed that this terminal disclaimer overcomes the provisional rejection of claims 1-10 and 12-18 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of co-pending U.S. Application No. 09/690 387.

Reply to the Rejection of the Claims under 35 U.S.C. § 102(e)

Diehl -

The Examiner has rejected claims 1-10 and 12-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,337,379 to Diehl *et al.* (“Diehl”). Specifically, the Examiner states –

Diehl *et al.* teach a latex binder comprising hydrophobic monomers (styrene), hydrophilic acidic monomers (itaconic acid, acrylic acid), water, and a surfactant (column 3, lines 29+ and the example). The latex is neutralized with bases such as sodium hydroxide as claimed. The materials are applied to a fiber mat (a textile application) in which solids concentrations of 15-45% are used (column 3, lines 1+). The applicants state that their materials are not cross-linked. While the materials taught by Diehl *et al.* are cross-linked this is done after the materials are dried at a lower temperature (212 deg F) (example). The intermediate (un-cured) product would correspond to the claimed materials.

The applicants claim a number of physical properties such as clarity, solubility in basic or acid media etc. . . The examiner takes the position that the monomer used would yield clear base soluble materials based on the monomers used because they correspond to the types of materials used by the applicants in the instant application.

Regarding claim 16, the fiber web formed is used in personal hygiene products so the materials do get wet. In this instance, the web would be water-resistant, as it would resist falling apart when placed in contact with water.

While small amounts of surfactants are used, since such small amounts are used (as low as 0.05% (column 3, lines 41+), the materials are “substantially free of surfactants” as claimed.

For the following reasons, Applicants respectfully traverse the Examiner’s rejection of claims 1-10 and 12-20 as being anticipated by Diehl.

Referring to Diehl, therein is disclosed a latex binder for nonwoven fabric applications in personal hygiene articles (Abstract). The latex binder is prepared by polymerizing a first monomer mixture that includes styrene, itaconic acid, surfactant and water soluble free radical initiator to form a seed (col. 3, lines 28-30). The surfactant is added in an amount of from about 0.05 to about 2.0 wt % (col. 3, lines 42-43). A second monomer mixture of styrene, butadiene and acrylic acid is added to the first monomer mixture under emulsion polymerization conditions to form a styrene-butadiene-acrylic acid copolymer (col. 3, lines 30-35).

The present invention has been amended to state that it does not contain a stabilizing surfactant. As noted above, the invention of Diehl requires at least 0.05 wt % of a stabilizing surfactant (col. 3, lines 27-30 and 42-58; claim 1 of Diehl). Further, the present invention is not a latex composition. Diehl specifically titles, claims and teaches a latex binder. As noted in the reply to the 112 rejection discussed above, the present invention claims "essentially no stabilizing surfactants, as opposed to a latex or emulsion polymer composition". For at least these reasons, Diehl does not anticipate the presently claimed invention. Withdrawal, therefore, of the rejection of claims 1-10 and 12-20 as being anticipated by Diehl is respectfully requested.

Schoenberg and Westerman -

The Examiner has rejected claims 1-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,150,468 to Schoenberg *et al.* ("Schoenberg") with additional evidence provided by U.S. Patent No. 6,488,764 to Westerman ("Westerman") if deemed necessary. Specifically, the Examiner states –

Schoenberg et al. teach emulsions comprising "star polymers" made from butyl acrylate (a hydrophobic monomer according to applicants' specification page 6) and acrylic monomers (a hydrophilic monomer). See Example III: The compositions comprise 10% solids, are clear and comprise: ethanol, which would function as an "anti-microbial agent" (claim 5) and sodium hydroxide.

The star polymer is also incorporated into a second composition (see column 7, lines 26+ and Examples 8 and 9), which is used as a laminating adhesive. See Westerman column 6, lines 67+, which shows that the Aerosol™ material used in Examples VIII and IX is a surfactant as claimed.

Both the intermediate product (star polymer) and the final product (polymer composition comprising the star polymer) read on the applicants' composition.

Regarding claims 17-20, the material taught are used as "coating" and "adhesives" which gives clear indication that the materials are used in multilayer structures, and they are used as sizes in "textile applications" (column 8, lines

46+). This is described with sufficient specificity to meet the applicants' claims directed to "coated articles" and "method of using the composition".

For the following reasons, Applicants respectfully traverse the Examiner's rejection of claims 1-20 as being anticipated by Schoenberg or rendered obvious by Schoenberg in view of Westerman.

Schoenberg and Westerman were previously discussed in Applicants' 29 July 2003 reply, those arguments being incorporated herein by reference. As previously indicated, Schoenberg teaches star polymers formed by first preparing a mercaptan core from a multifunctional alcohol. Each of the -OH functional units are substituted with thiol units. Monomers such as acrylic and methacrylic acids, acrylonitrile, styrene and vinyl esters are then added to this mercaptan core to form the star polymer (col. 3, line 66 – col. 4, line 2; col. 4, lines 38-40 and 47-49; col. 4, line 60 – col. 5, line 19; Examples III-IX). A surfactant (Aerosol® MA) is used in the emulsion polymerization (Examples VIII and IX). Schoenberg recognizes that it "is well known to those skilled in the art . . . that emulsion polymers . . . are generated in the presence of surface active and/or stabilizing moieties" (col. 7, lines 13-25), which teaches away from the presently claimed invention. The Examiner refers to Westerman for evidence that the Aerosol® used in Examples VIII and IX of Schoenberg is a surfactant.

In contrast to Schoenberg and Westerman, the present invention as amended does not contain a stabilizing surfactant. Schoenberg and Westerman require a stabilizing surfactant. For at least these reasons, withdrawal of the rejection of claims 1-20 as being anticipated by Schoenberg, with additional evidence from Westerman, is respectfully requested.

Kneip -

The Examiner has rejected claims 1-10 and 12-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,200,640 to Kneip *et al.* ("Kneip"). Specifically, the Examiner states –

Kneip *et al.* teach polymeric dispersions used to tan leather (claims). The materials comprise a tanning agent (preservative) and are neutralized with a base such as sodium hydroxide (column 8, lines 41+). The solutions have solids contents within the preferred range of 20 to 60% (column 8, lines 58-60).

For the following reasons, Applicants respectfully traverse the Examiner's rejection of claims 1-10 and 12-20 as being anticipated by Kneip.

Referring to Kneip, therein is disclosed a polymeric composition and process for treating

leather and fur skins. Copolymers are obtained by free-radical copolymerization of at least one monoethylenically unsaturated C₄- to C₆-dicarboxylic acid or anhydride thereof, at least one olefin having 2 to 6 carbon atoms, at least one hydrophobic comonomer, and at least one comonomer selected from acrylic acid, methacrylic acid, methyl methacrylate, N,N-dimethylaminoethyl acrylate and styrene (Abstract; col. 6, lines 3-24). Emulsifiers or protective colloids are used in concentrations of from 0.05 to 15% based on the monomer used (col. 7, lines 46-67)

In contrast to Kneip, the present application does not require the use of olefin monomers to produce its aqueous polymer composition. For at least these reasons, withdrawal of the rejection of claims 1-10 and 12-20 as being anticipated by Kneip is respectfully requested.

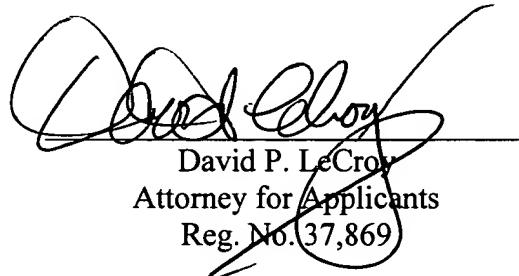
The Examiner's position in his 'Response to Arguments' for maintaining his rejections appears to be based on the statement "that the compositions are 'substantially free', not 'free' so small amounts of surfactants are permitted". The Examiner recognizes that the compositions of all prior art cited uses very small amounts of surfactants. As shown above, the specification of the present invention teaches that the present invention is substantially or essentially free of surfactants in contrast to latex or emulsion polymer compositions. The Diehl reference cited by the Examiner is a latex composition and requires at least 0.05 wt % of a stabilizing surfactant. Accordingly, one skilled in the art would recognize that the presently claimed invention contains less than 0.05 wt % of surfactants, essentially containing no stabilizing surfactants ("substantially no stabilizing surfactants" as claimed).

It is believed that the above amendments and remarks overcome the Examiner's objections to and rejections of the claims. Withdrawal of those objections and rejections is respectfully requested. Allowance of the claims is believed to be in order, and such allowance is respectfully requested.

Respectfully submitted,

Dated: 18 November 2003

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